

早稲田大学審査学位論文  
博士（スポーツ科学）  
概要書

The associations of depression, anxiety, self-efficacy, and family social support with self-care behaviors in patients with hypertension

高血圧患者における自己管理行動と精神心理的要因  
および社会的要因との関係

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## Research summary:

The current study was conducted to test the role of family social support, depression, anxiety, and self-efficacy on specific hypertension self-care behaviors. This study consisted of two parts.

**In part 1**, we validated a Chinese version of self-efficacy scale for managing chronic disease and developed a Chinese family support scale, which were used for assessing self-efficacy and family social support in this study;

**In part 2**, we tested the role of family social support, depression, anxiety, and self-efficacy on specific hypertension self-care behaviors.

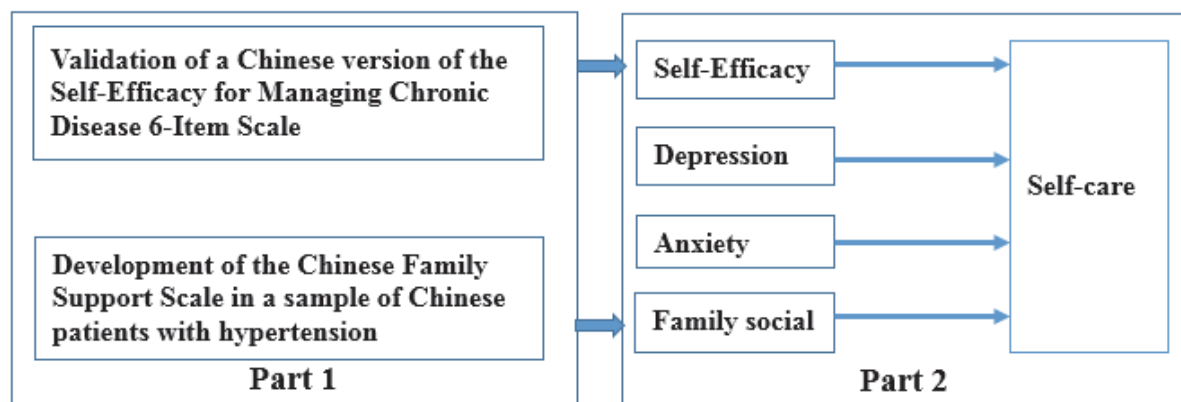


Figure 1 Overview of hypertension self-care study

## Recruitment and study cohort

We mainly recruited subjects for this study through a community health center, which is a public medical center providing medical and public health services to civilians. As some hypertensive patients may have not attended the health clinic and were not registered, we also recruited subjects through word-of-mouth and put up a poster in the community to create awareness about the study.

After exclusion or drop out from the study, a final study population of 318 patients (289 recruited from registration, 17 from referral, and 12 from the poster advertisement) participated in this study.

First, the 318 patients with hypertension completed a questionnaire assessing self-care, family social support, depression, anxiety, and self-efficacy. Second, to examine the test-retest reliability of self-efficacy scale and family social support scale, a subsample of patients (289 recruited from registration) were re-collected after two weeks.

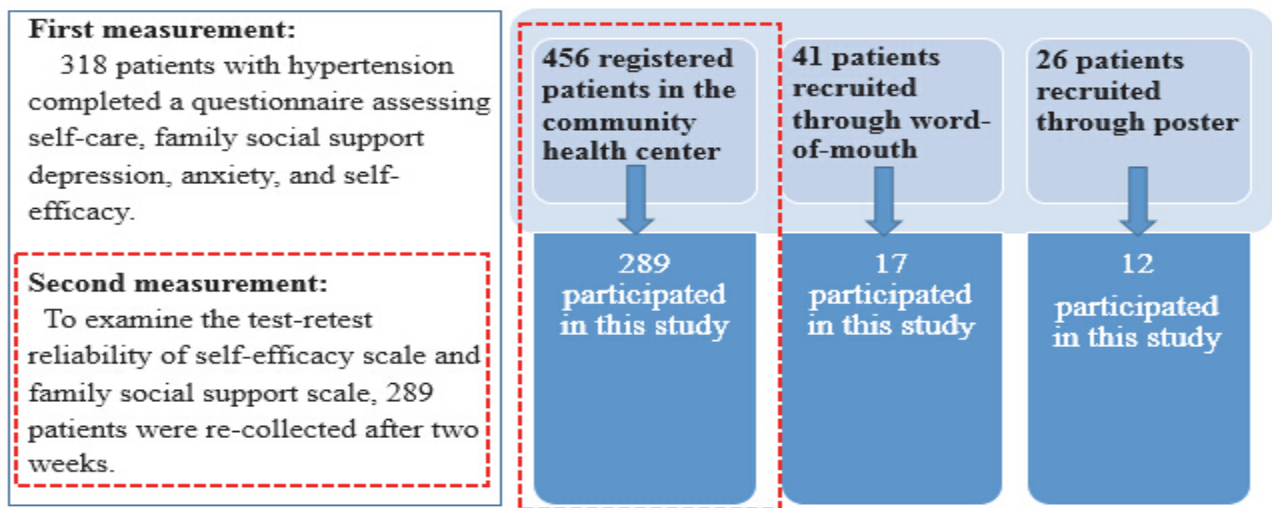


Figure 2 Recruitment and study cohort of hypertension self-care study

### Main findings:

The Chinese version of the self-efficacy for managing chronic disease 6-item scale displayed acceptable psychometric properties: the scale was two-dimensional, reproducible (intraclass correlation coefficients (ICC) =0.78; 95% CI, 0.70-0.84), and the reliability was good (Cronbach's alpha =0.88). For the Chinese Family Social Support Scale, exploratory factor analysis revealed a three-factor solution accounting for 62% of the total variance. The three underlying sub-scale dimensions were kinship, nuclear family, and social resources. The Chinese Family Support Scale had an acceptable internal consistency (Cronbach's alpha = 0.84) and test-retest reliability (ICC = 0.82).

The full sample analysis showed that for medically-related self-care behaviors, 61.3% of participants reported taking medication as prescribed, and 44.3% reported measuring blood pressure (BP) regularly. Adherence to lifestyle-related self-care behaviors was reported in 51.9%–81.1% of participants. The mean score of perceived family social support for hypertension treatment was 20.91 (maximum = 60). Adult children were identified as the primary support source. Approximately 22.3%, and 15.4% of participants reported symptoms of anxiety, and depression, respectively. Participants had moderately positive levels of confidence performing self-care (42.1 out of 60). After adjusting for demographic and health variables, a 10-unit increase in family social support increased the odds of taking medication by 1.39 (95% CI 1.03–1.87) and increased the odds for measuring blood pressure regularly by 1.33 (95% CI 1.02–1.74). Depression and anxiety were not associated with any self-care behaviors. A 10-unit increase in self-efficacy increased the adjusted odds ratio for performing physical exercise to 1.25 (95% CI 1.04–1.49).

In conclusion, family social support was significantly associated with medication adherence and BP monitoring. Two other self-care behaviors (physical exercise, and following a low-salt diet) showed associations with family social support, which bordered statistical significance. Strategies to improve family social support should be developed for hypertension control.